The 4th Element of Risk

12.07.05

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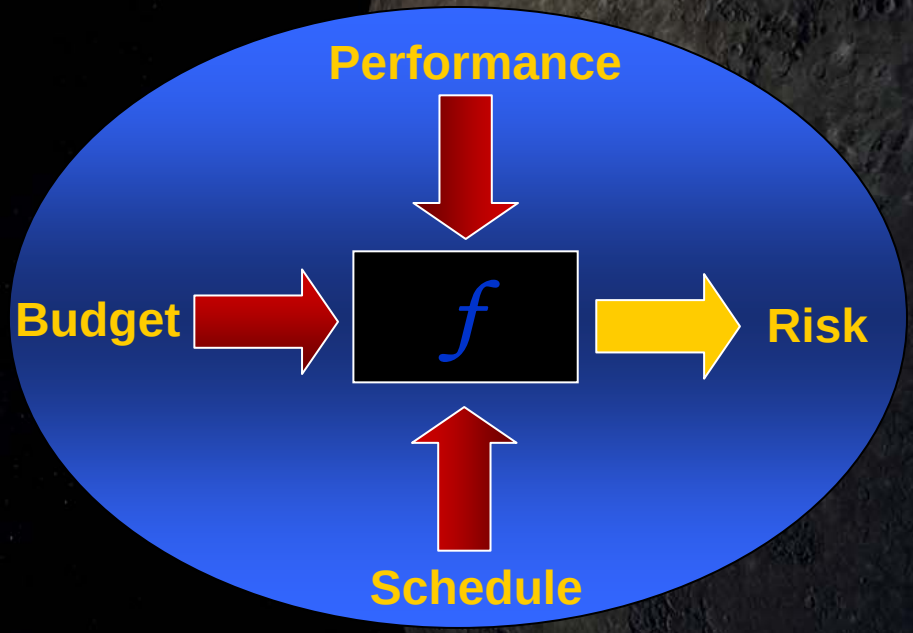
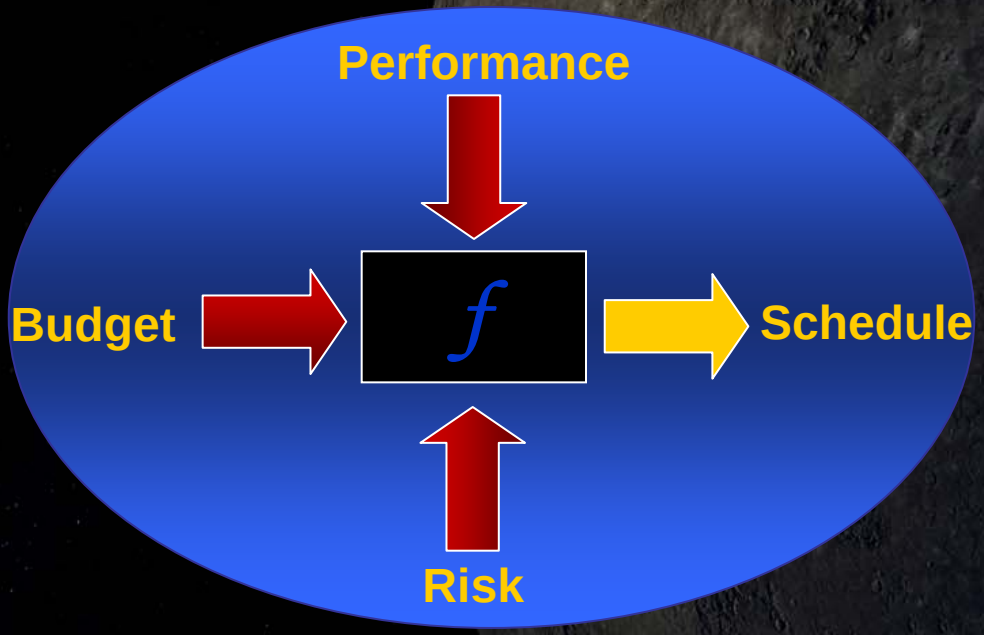
Project View of Risk (Typical)



Project View of Risk (Post Columbian)



Planning for Risk

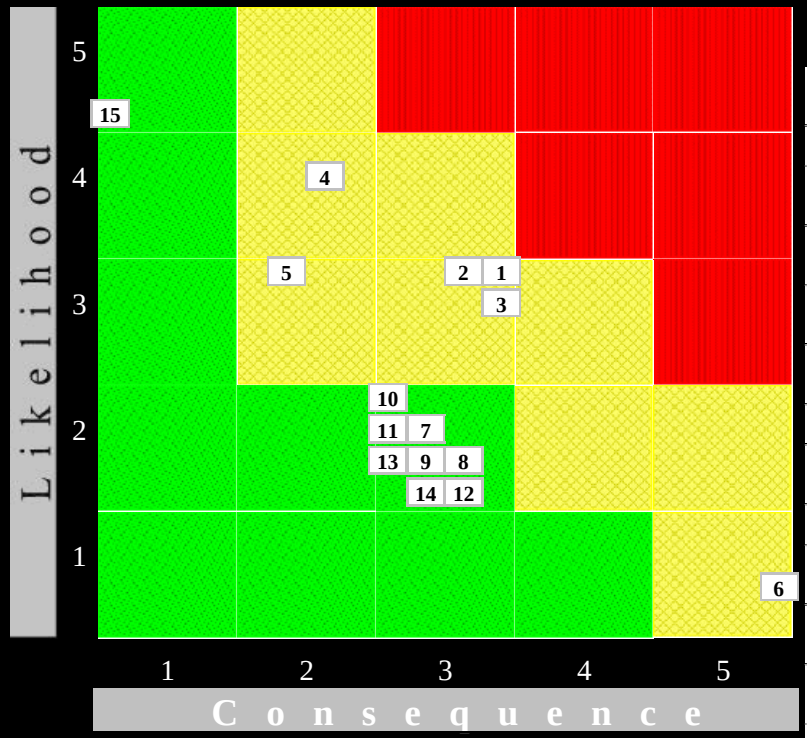
$p(x_i)$	Risk (x_i)	Consequence $c(x_i)$	$p(x_i)c(x_i)$
0.35	Electronic Parts Problem	6 mos. Schedule slip on critical path ($30M)	$10.5
0.7	Test Failures	3 mos. Schedule slip ($15M)	$10.5
0.25	Partner Issues	Cost overrun ($5M)	$1.2
0.15	Inadequate Cost Estimates	Cost overrun ($123M)	$18.5
		TOTAL	$40.7

Reserve = $\Sigma\ p(x_i)c(x_i)$

Managing Risk

GP-B 5x5 Risk Summary From 10/11/2002 to 04/10/2003

(Top 15 Risks)



LxC Trend	Rank From/To	Risk ID No.	Approach- Risk Title
-	1	GP-B-61	M- Schedule Delay due to ACE-B/PDU Thermal Vacuum Test Anomaly
-	2	GP-B-63	M- Potential Failure of Star Sensor B to Sync with 1553
-	3	GP-B-66	M- Excessive Leakages of the Vatterfly Valves before Launch
4	4	GP-B-10	M- Late Closeout of Verification Letters of Acceptance (VLOA's)
-	5	GP-B-55	A- Loss of F0 Clock Source because of Poor Quality Parts
▲ 40	6	GP-B-22	A- Degraded Performance because of Ground Testing Limitations
11	7	GP-B-36	M- Degraded Vehicle Performance from EMI
10	8	GP-B-16	A- Vatterfly Valve Seals Leakage During Launch and Ascent
13	9	GP-B-39	W- Impurities in Cryo System
15	10	GP-B-15	M- Failure of Payload Electronics Box(es) During Vehicle Testing
-	11	GP-B-60	W- Hardware Failures due to Lack of Emphasis on Systems Eng. Processes and Methods in Eng. Mgt.
-	12	GP-B-54	M- Error Analysis Compromised by Lack of Formal Requirement Flow-Down.
19	13	GP-B-37	M- Insufficient System Level Analysis of Failures & Consequences
-	14	GP-B-65	R- Space Vehicle Damage from Orbital Debris Penetration
21	15	GP-B-26	W- Lower Program Reliability Than Calculated Because of Non-conventional Reliability Program

Criticality

- High
- Med
- Low

Risk Trend	30 Days Ago	60 Days Ago	90 Days Ago	Risks	Current Period
Open	43	45	45	Open	43
Closed	22	18	16	Closed	26
				New	16

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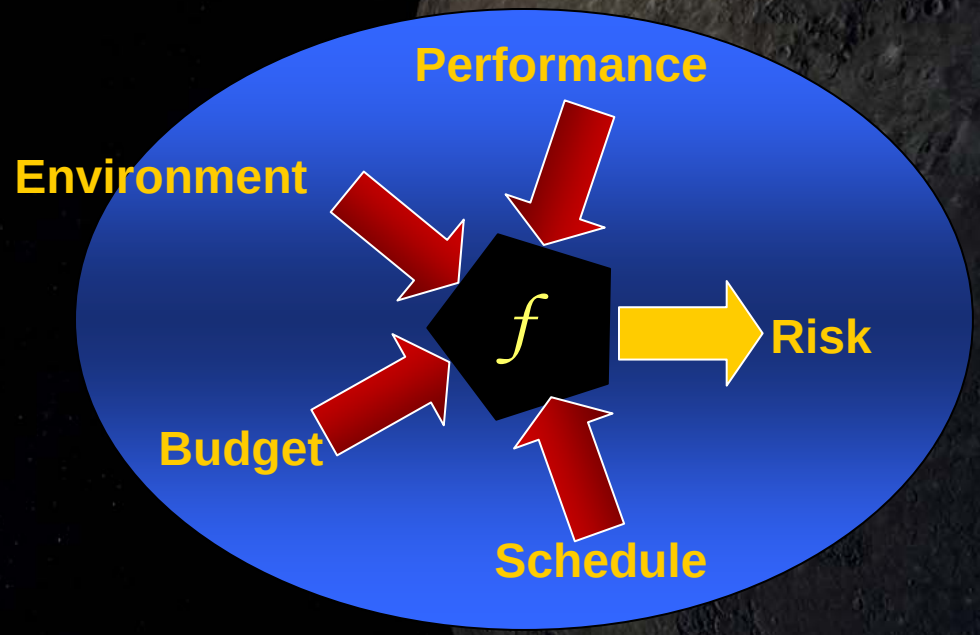
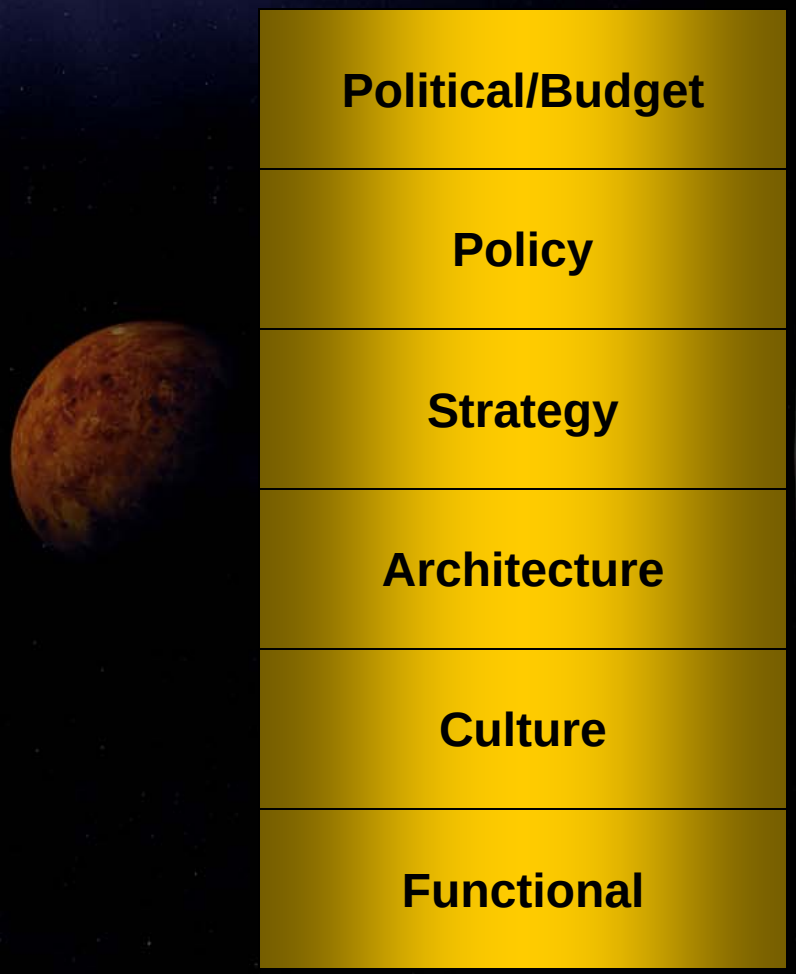
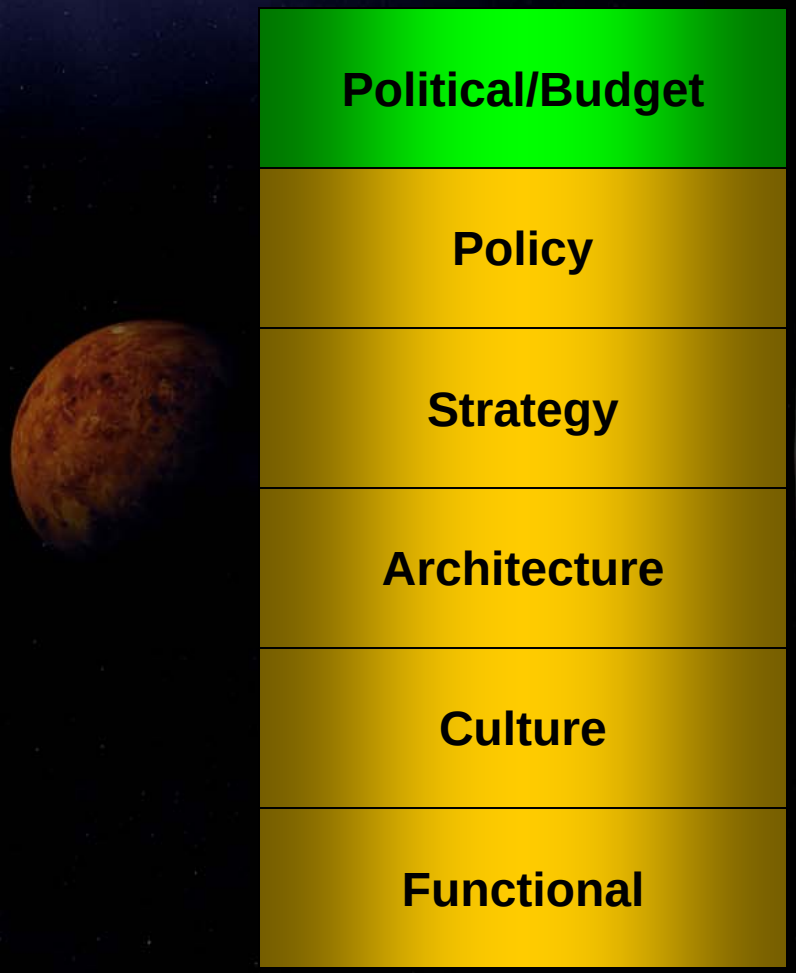
4th Dimension of Risk



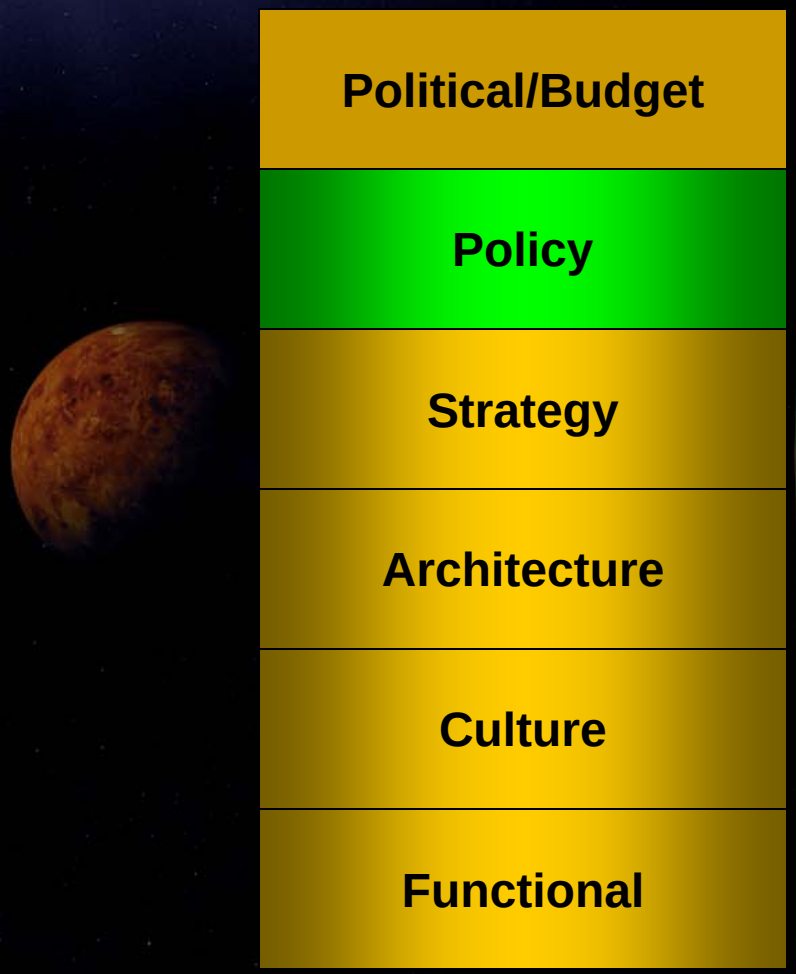
Spectrum of Environmental Influences on Risk



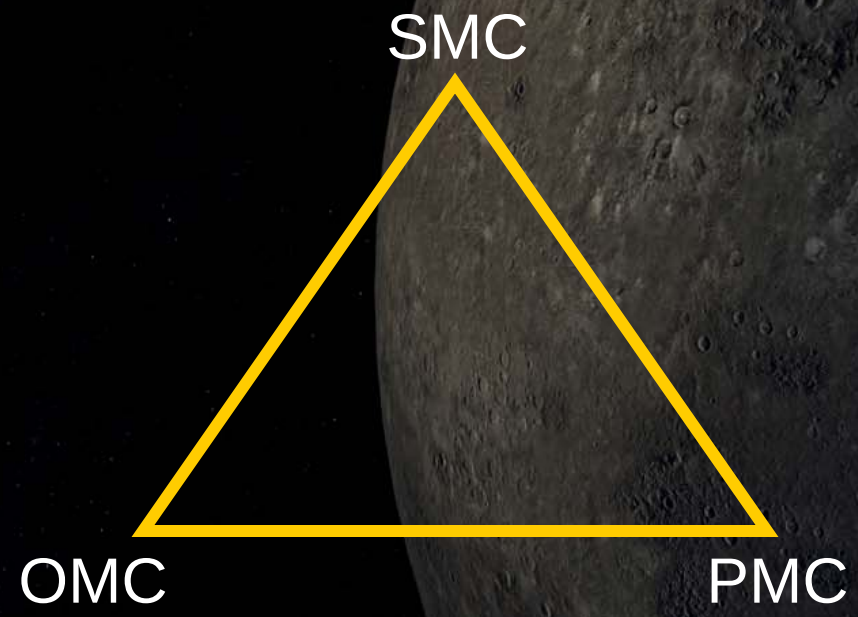
Political/Budgetary Influence on Risk



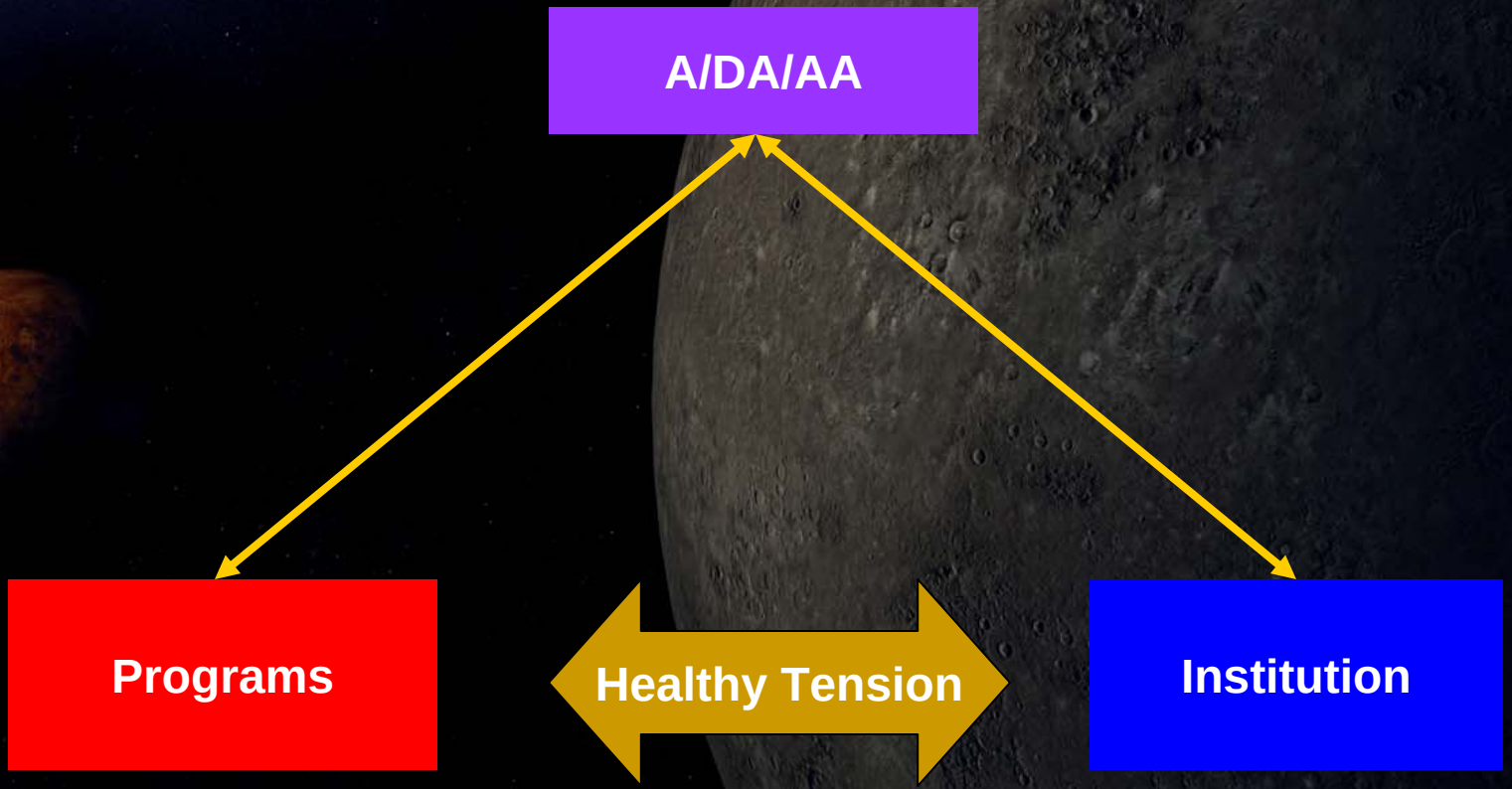
Policy Influences on Risk



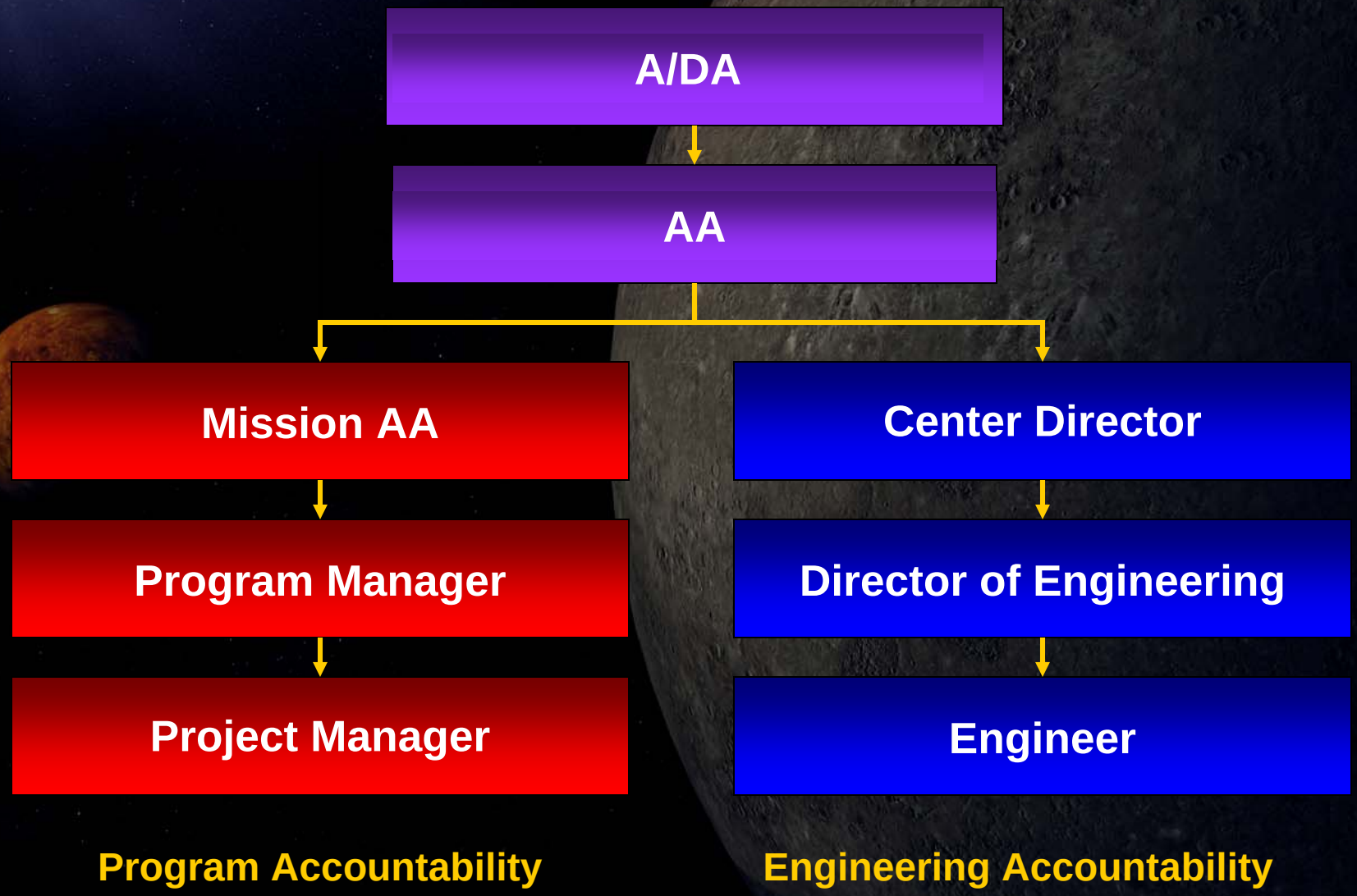
Simplified Governance



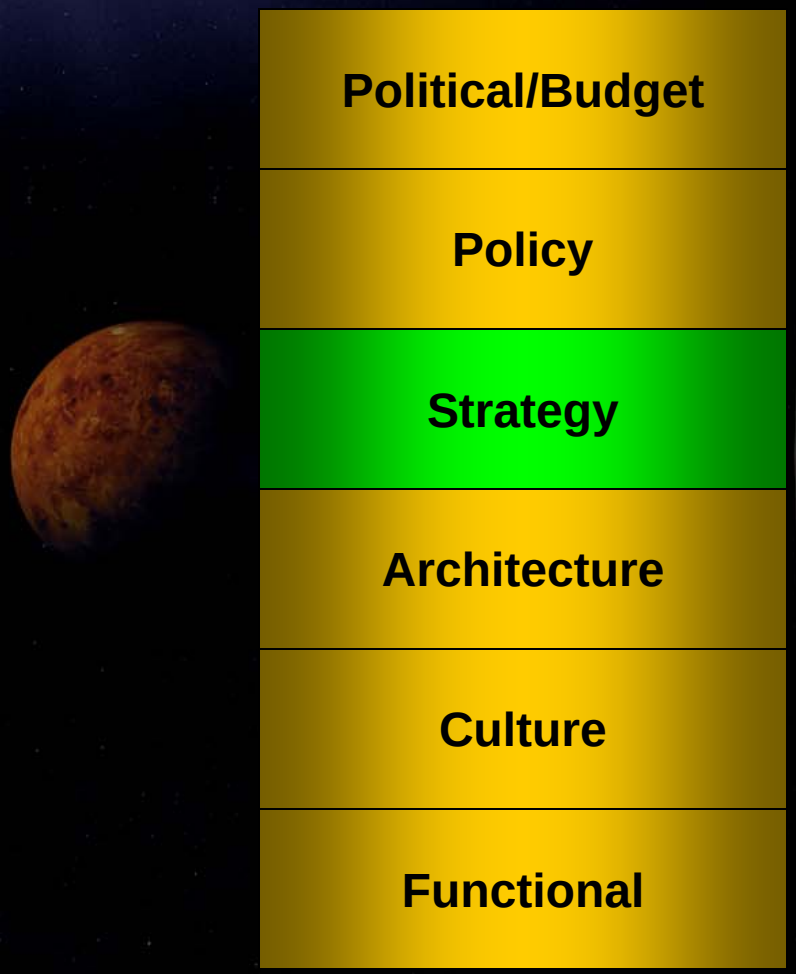
Technical Independence (iTA)



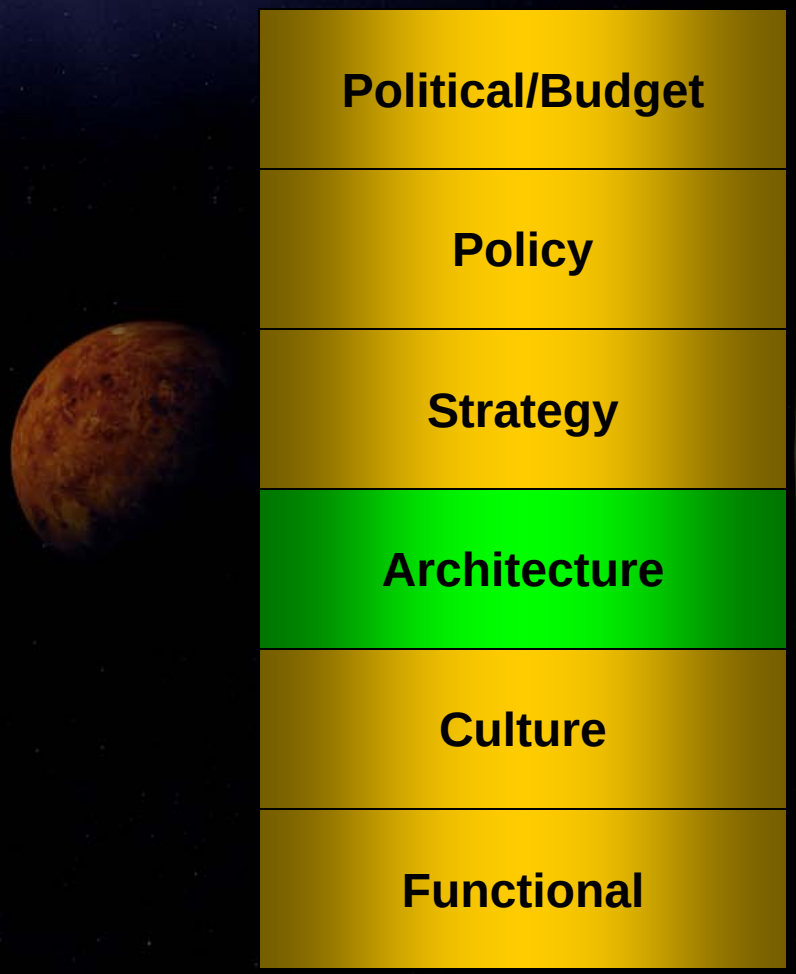
Program/Technical Independence



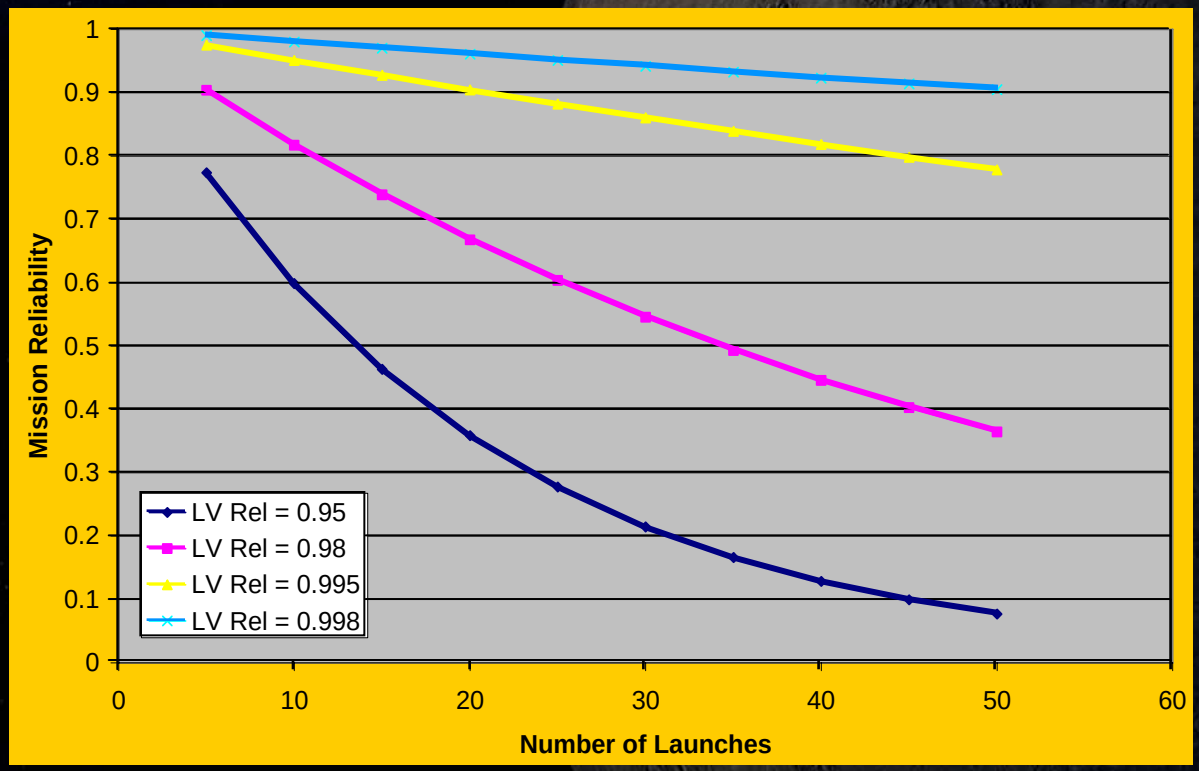
Strategic Influence on Risk



Architectural Influence on Risk



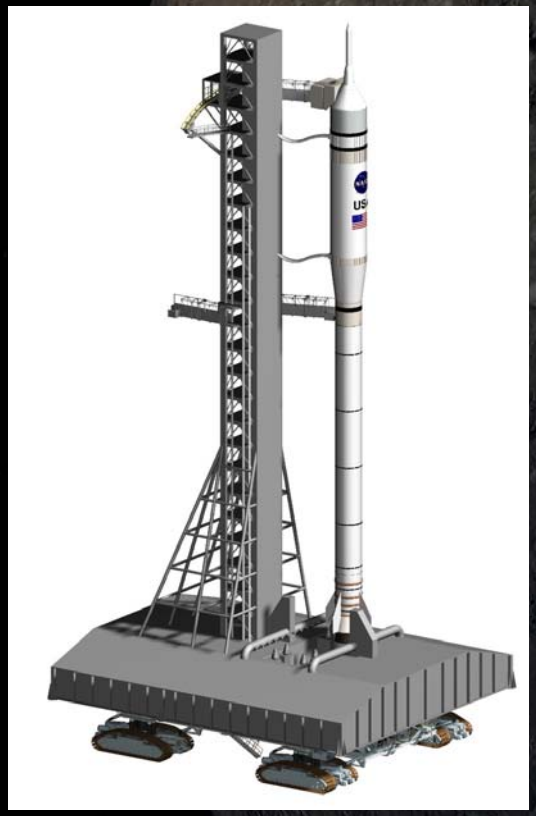
EELV-centered Architecture



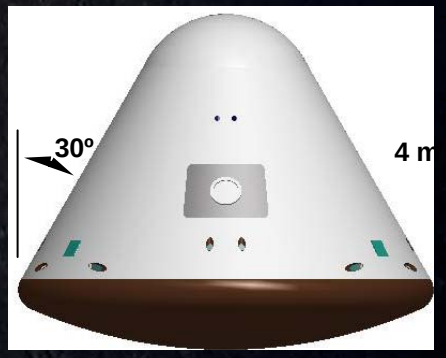
ESAS Architecture

CaLV

CLV

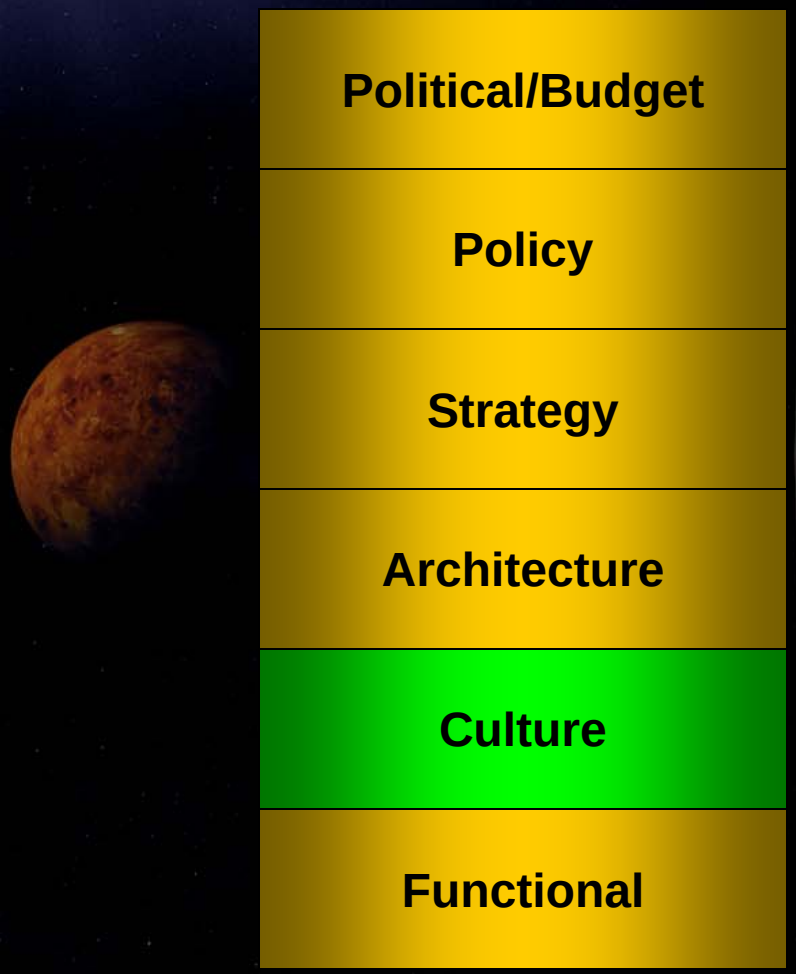


MLP

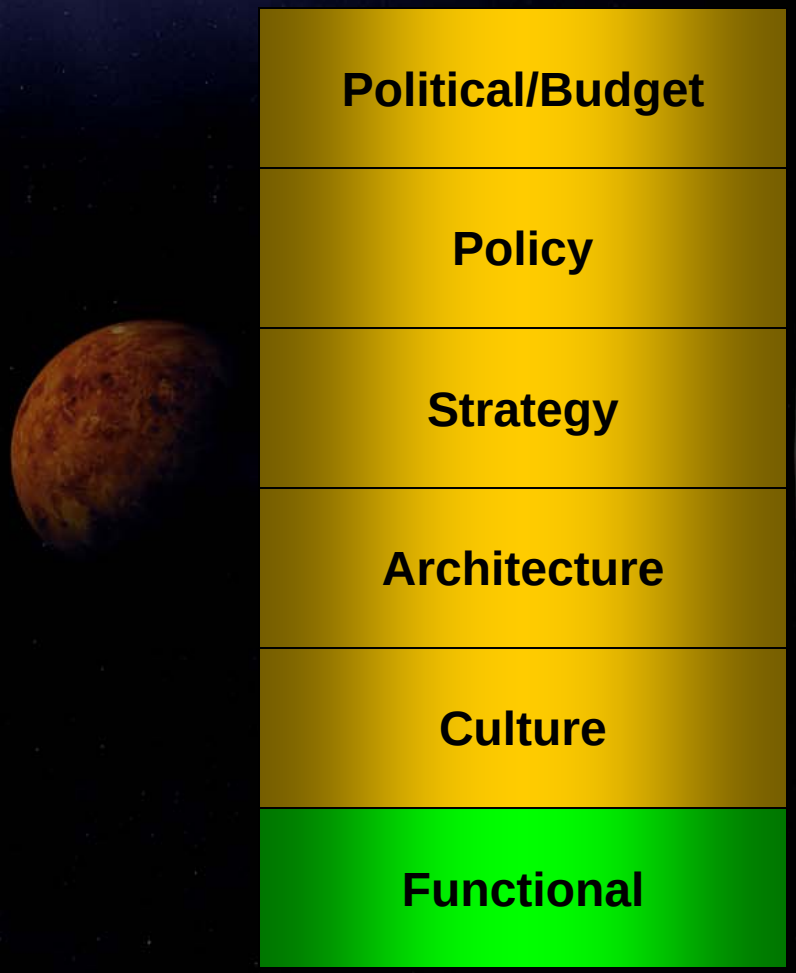


CEV

Cultural Influence



Functional Influence



4th Dimension of Risk